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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,286	07/09/2001	Hal Joseph Burch	2-9	7595

7590 07/14/2006

Lucent Technologies Inc.
Docket Administrator (Room 3J-219)
101 Crawfords Corner Road
Holmdel, NJ 07733

EXAMINER	
HOFFMAN, BRANDON S	

ART UNIT	PAPER NUMBER
2136	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/901,286	BURCH ET AL.	
	Examiner	Art Unit	
	Brandon S. Hoffman	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-30 are pending in this office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 26, 2006, has been entered.

3. Applicant's arguments are moot in view of the new ground of rejection.

Rejections

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

5. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross (U.S. Patent No. 7,032,020) in view of Duffield et al. (U.S. Patent No. 6,873,600).

Regarding claims 1 and 16, Gross discloses a method/apparatus for tracing a sequence of packets to a potential source thereof within a communications network, the sequence of packets being received at a target host in said communications network at a received packet rate, the method comprising the steps of:

- **Identifying a plurality of network elements comprised in said communications network** (fig. 3, ref. num SN1-SN8 and A-K);
- Applying a burst load to **a** selected **one of said identified** network elements in said communications network (col. 5, lines 44-51);
- Measuring a change in said received packet rate in response to said application of said burst load to said selected network element (col. 7, lines 48-51); and
- **Repeating steps 2-4 on other selected network elements a plural number of times to generate a path leading from said target host to said potential source based on the selected network elements which have been included in said potential path** (col. 7, lines 31-51).

Gross does not teach **including said selected network element in a potential path if said change in said received packet rate fails to meet a predetermined criterion**.

Duffield et al. teaches **including said selected network element in a potential path if said change in said received packet rate fails to meet a predetermined criterion** (fig. 1).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine **including said selected network element in a potential path if said change in said received packet rate fails to meet a predetermined criterion**, as taught by Duffield et al., with the method/apparatus of Gross. It would have been obvious for such modifications because measuring a potential path for a DoS attack allows direct inference of traffic flows traversing a certain subset of the network (see abstract of Duffield et al.).

Regarding claims 2 and 17, Gross as modified by Duffield et al. discloses wherein said communications network comprises the Internet (see col. 3, lines 22-25 of Gross).

Regarding claims 3 and 18, Gross as modified by Duffield et al. discloses wherein each of said selected network elements comprises a network link (see fig. 3, ref. num 90 of Gross).

Regarding claims 4 and 19, Gross as modified by Duffield et al. discloses wherein said step of applying a burst load to said network link comprises transmitting packets to a sub network of said communications network to initiate a responsive flow of packets through said network link (see col. 6, lines 20-29 of Gross).

Regarding claim 5 and 20, Gross as modified by Duffield et al. discloses wherein said transmitted packets are spoofed from an end of said network link closest to said target host (see col. 21, lines 49-53 of Duffield et al.).

Regarding claims 6 and 21, Gross as modified by Duffield et al. discloses wherein said transmitted packets comprise UDP chargen requests (see col. 5, lines 21-23 of Gross).

Regarding claims 7 and 22, Gross as modified by Duffield et al. discloses wherein each of said selected network elements comprises a network router (see col. 3, lines 28-30 of Gross).

Regarding claims 8 and 23, Gross as modified by Duffield et al. discloses further comprising the step of generating a map comprising routes from said target host to a plurality of sub networks of said communications network (see fig. 3 of Duffield et al.).

Regarding claims 9 and 24, Gross as modified by Duffield et al. discloses further comprising the step of eliminating said selected network element from consideration as said potential source of said sequence of packets when said change in said received packet rate meets **the** predetermined criterion (see col. 17, lines 43-52 of Duffield et al.).

Regarding claims 10 and 25, Gross as modified by Duffield et al. discloses wherein said predetermined criterion comprises a determination of whether said change in said received packet rate is less than a predetermined threshold (see col. 22, lines 38-45 of Duffield et al.).

Regarding claims 11 and 26, Gross as modified by Duffield et al. discloses wherein said step of eliminating said selected network element from consideration also eliminates from consideration one or more sub networks of said communications network which are connected to said selected network element (see col. 17, lines 43-52 of Duffield et al.).

Regarding claims 12 and 27, Gross as modified by Duffield et al. discloses wherein said sequence of packets comprises a Denial-of-Service attack on said target host (see col. 21, lines 49-61 of Duffield et al.).

Regarding claims 13 and 28, Gross as modified by Duffield et al. discloses wherein said steps of applying said burst load, measuring said changes in said received packet rate, and determining said potential source of said sequence of packets, are executed under the control of an automated algorithm (see col. 8, lines 23-25 of Gross, a program).

Regarding claims 14 and 29, Gross as modified by Duffield et al. discloses wherein said steps of applying said burst load and determining said potential source of said sequence of packets, are executed under the at least partial control of a human operator (see col. 8, lines 23-25 of Gross, a user).

Regarding claims 15 and 30, Gross as modified by Duffield et al. discloses further comprising the step of displaying information, said information including data representative of said measured changes in said received packet rate, to said human operator, for use by said human operator in exercising said at least partial control (see col. 8, lines 23-25 of Gross, a user).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S. Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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